		277	293
	SL3-2	(199) ASKAWGLR	LYRSTRTDP
	MCF-247	(199) GPKVWGLR	YRSTGIDE.
	MCF CI-3	(199) GPKVWGLR	YRSTGTDE
	Ampho-MCF		MOSTG DP
	ERV-1		RSTGTDP
Endogenous	from 129 GIX+ mice		LYRSTGTDP
	Friend MCF #2		IN RSTGT DE
	Friend MCF		LYRSTGIDE
	Friend SFV		LYRSTGTDP
	Invitro MCF		IN RSTGT DE
	MCF 1223		LYRPTGTDP
	MLV DBA/2		LYRSTGTDP
	MCF (Broscius)		IMQSTGIDP
*****	Mo-MCF		DYRSTGI DP
	Ns-6(186) MCF		IYRSTGI DP
	Rauscher sfv		LYRSTGTDP
	R-XC-	(199) GPKV <mark>WGL</mark> R	
	MCF (Ter-Grigorov)		LYRSTGTDP
	AKV		ILYVS+G#DP
•	Friend		LYVS-GODE
	Moloney		LYVS-GODP
	SL3-3		TYVS G#DP
	Friend fass		RLYVS+GRDE
	10A1		LYRT-GTDP
	4070A		RLYRT GTDP
	Xeno CWM-S-5X		RLYRSTGADE
	DG-75 Xeno	EVI E	RLYRSTGADE
	Xeno NZB-9-1		RLYRSTGADE
	Xeno Bxv-1-related		RLYRSTGADE
•	Xeno R-MCF-1		RLYRSTGTDP
	Consensus	(277) GPKVWGLI	RLYRSTGTDP



\$L3-2 MCF-247	(1)	MEGPA	FSKPL	KDKIN O	PWGPL PWGPL	IVLG	ILMRI ILJRI	30 RVSV GVSV	QIIDS P RHDS P	HQVFI TVQHQ	ĬŸŤŴŔĬ ĮVTWR	VTNLM7 VTNLM7	rgota rgota	nātsīlo Natsilo
							Leo	ider						
										· · · · · · · · ·				Section
SL3-2 MCF-247	(66) (66) (66)	MTDAF	PKLYF PKLYP	BLCDL DLCDL DLCDL	IGDDW	DETG	90 LGCRI	PGGR PCOR	100 KRARI KRARI	FDFY FDFY	I 110_ VCPGH: VCPGH:	TVLĀĠĢ TVPTĢ	_120 CGGPR CGGPR	EGYCGKV EGYCGKV
	()							(VRA			C4-
	(131)	131	14	40	1	50		.160		170		.180		Section
SL3-2	(131)	CETTG	OAYWK	PSSSW	DLISI	KRGN	TPKG TPQN(ÖĞPCY	DSSV	SSSA	QGATP KGATP	GGRCN	PLVLE	FTDAGKI FTDAGKI
			•		•`		-		VRB		•			
												· · · -		Sectio
\$13-2	(196) (196) (196)	SWDAS	KAWGL KVWGL	RLYRS	10 TRTDI TGIDI	VTRE	220 SLTR SLTR	OAFNI OAFNI	230 GPRVI	PIGPN PIGPN	240 PVIID PVITD	QLPPS QLPPS	250 RPVQI RPVQI	MLPRPP MLPRPP
		٧	;	/ R 3	o.e. [*]									
						 .80 [†] :		290		300	 	310		Sectio
SI 3-3	(261)	261	2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2	70 5 5 7 3 0 5			T.T.NIT.		CALM		KTORC	WICLV	AGPPY	(YEGVAV)
SL3-2 MCF-247	(261)	PPPGA	ASTVP	ETAPI	SOOP	TGDE	RLLNL	VNGAY	QALN	LTSPD	KTQEC KTQEC	MFCFA	ägpey Sgpey	(YEGVAV) (YEGVAV)
\$L3-2 MCF-247	(261)	PPPGA	ASTVP	ETAPI	SOOP	TGDE	ELLNL' ELLNL'	VNGAY	QALNI QALNI	LTSPD	KTOEC KTOEC	WLCLV WLCLV	ägpp) ägpp)	(YÆGVAV) (YEGVAV) Sectlo
MCF-247 SL3-2	(326) (326)	PPPGA PPPGA 326 TYSNF	ASTVP ASTVP	ETAPI ETAPI	SOOPO	etgdi etgdi etgdi	LLNL 350 VTGQ	VNGAY VKGAY	 360 3AVPK	LTSPD LTSPD	KTQEC 370 CNTTQ	WLCLV KTSNG	SGPPY 380 SYYLI	(YEGVAV)
MCF-247 SL3-2	(326) (326)	PPPGA PPPGA 326 TYSNF	ASTVP ASTVP	ETAPI ETAPI	SOOPO	etgdi etgdi etgdi	LLNL 350 VTGQ	VNGAY VKGAY	 360 3AVPK	LTSPD LTSPD	KTQEC 370 CNTTQ	WLCLV KTSNG	SGPPY 380 SYYLI	(YEGVAV)Sectlo
MCF-247 SL3-2	(326) (326)	PPPGA PPPGA 326 TYSNF	ASTVP ASTVP	ETAPI ETAPI	SOOPO	etgdi etgdi etgdi	LLNL 350 VTGQ	VNGAY VKGAY	 360 3AVPK	LTSPD LTSPD	KTQEC 370 CNTTQ	WLCLV KTSNG	SGPPY 380 SYYLI	(YEGVAV)Sectlo
SL3-2 MCF-247	(326) (326) (326) (326) (326)	PPPGA PPPGA 326 TYSNH TYSNH 391 CNTGI	ASTVP ASTVP TSAPA TSAPA	ETAPE PETAPE ANCSVA ANCSVA	PSQQPO PSQQPO MAQ MSQHKI MSQHKI	STGDF STGDF LTLS:	SEO EVTGO	VNGAY VKGAY GLOVG GLOVG 420	QALNI 360 SAVPK	LTSPD LTSPD THQAL THQAL 430 VYGOF	S70 S70 CNTTO CNTTO	WECLV KTSNG KTSDG 	380 SYYLI SYYLI	YEGVAVI Sectlo SAAPAGTI AAPTGTT
SL3-2 MCF-247	(326) (326) (326) (326) (326)	PPPGA PPPGA 326 TYSNH TYSNH 391 CNTGI	ASTVP ASTVP TSAPA TSAPA	ETAPE PETAPE ANCSVA ANCSVA	PSQQPO PSQQPO MAQ MSQHKI MSQHKI	STGDF STGDF LTLS:	SEO EVTGO	VNGAY VKGAY GLOVG GLOVG 420	QALNI 360 SAVPK	LTSPD LTSPD THQAL THQAL 430 VYGOF	S70 S70 CNTTO CNTTO	WECLV KTSNG KTSDG 	380 SYYLI SYYLI	YEGVAVI Section AAPAGTT AAPTGTT AAPTGTT LALLIGG
SL3-2 MCF-247	(326) (326) (326) (326) (326)	PPPGA PPPGA 326 TYSNH TYSNH 391 CNTGI	ASTVP ASTVP TSAPA TSAPA	ETAPE PETAPE ANCSVA ANCSVA	PSQQPO PSQQPO MAQ MSQHKI MSQHKI	STGDF STGDF LTLS:	SEO EVTGO	VNGAY VKGAY GLOVG GLOVG 420	QALNI 360 SAVPK	LTSPD LTSPD THQAL THQAL 430 VYGOF	S70 S70 CNTTO CNTTO	WECLV KTSNG KTSDG 	380 SYYLI SYYLI	YEGVAVI Section AAPAGTT AAPTGTT AAPTGTT LALLIGG
SL3-2 MCF-247 SL3-2 MCF-247	(326) (326) (326) (326) (326) (391) (391) (391)	PPPGA PPPGA 326 TYSNE TYSNE CNTGI CSTGI	ASTVP ASTVP TSAPA TPCES	ETAPE PETAPE ANCSVA ANCSVA 100 STTÜLL	PSQQPO PSQQPO ASQHKI ASQHKI DLTTD	TTGDF STGDF TTLSI TTLSI	350 EVTGQ EVTGQ VELWP	VNGAY VKGAY VKGAY GLOVG GLOVG 420 KVTYI	360 SAVPK SAVPK HSPGY HSPSY	THQAL THQAL 430 VYGQF	370 CNTTQ CNTTQ CNTTQ EEKTK ERRAK	WLCLV KTSNG KTSDG 440 YKREP	360 PY 380 SYYLI SYYLI VSLTI VSLTI	Section
SL3-2 MCF-247 SL3-2 MCF-247	(326) (326) (326) (326) (326) (391) (391) (391) (456)	PPPGA PPPGA 326 TYSNH TYSNH CNTGI CSTGI	ASTVP ASTVP TSAPA TSAPA TPCIS	ETAPE PETAPE ANCSVA INCSVA STTÜLI	SOOPO SOOPO	STGDE STGDE LTLSI 110 YCVLY	S50 EVTGQ EVTGQ VELWP VELWP	VNGAY VKGAY VKGAY GLOVE GLOVE 420 420 VTYP EVTYP QDDLI	360 SAVPK SAVPK SAVPK HSPGY HSPSY	THQAL THQAL THQAL VYGQF VYHQF	370 CNTTQ CNTTQ CNTTQ EEKTK ERRAK 500 ERSL1	WLCLV KTSNG KTSDG 440 YKREP YKREP	380 SYYLI SYYLI VSLTI VSLTI VSLTI	Section AAPAGTI AAPTGTT Section LALLIGG LALLIGG LALLIGG Section
SL3-2 MCF-247 SL3-2 MCF-247	(326) (326) (326) (326) (326) (391) (391) (391) (456)	PPPGA PPPGA 326 TYSNH TYSNH CNTGI CSTGI	ASTVP ASTVP TSAPA TSAPA TPCIS	ETAPE PETAPE ANCSVA INCSVA STTÜLI	SOOPO SOOPO	STGDE STGDE LTLSI 110 YCVLY	S50 EVTGQ EVTGQ VELWP VELWP	VNGAY VKGAY VKGAY GLOVE GLOVE 420 420 VTYP EVTYP QDDLI	360 SAVPK SAVPK SAVPK HSPGY HSPSY	THQAL THQAL THQAL VYGQF VYHQF	370 CNTTQ CNTTQ CNTTQ EEKTK ERRAK 500 ERSL1	WLCLV KTSNG KTSDG 440 YKREP YKREP	380 SYYLI SYYLI VSLTI VSLTI VSLTI	Section APPAGTI APPAGTI APPAGTI APPAGTI APPAGTI APPAGTI Section CALLLGG CALLGG CALLLGG CALL
SL3-2 MCF-247 SL3-2 MCF-247 SL3-2 MCF-247	(326) (326) (326) (326) (326) (326) (391) (391) (391) (456) (456) (456) (456)	PPPGA PPPGA 326 TYSNE TYSNE CNTGI CSTGI MGGIA MGGIA KEGGI	ASTVP ASTVP ASTVP ASTVP ASTVP ASTPCES ASGVG1	ETAPE ETAPE ANCSVA ANC	PSQQPO PSQQPO A40 ASQHKI ASQHKI ASQHKI AVATQ LVATQ LVATQ	STGDESTGDESTGDESTGDESTGDESTGDESTGDESTGDE	350 EVTGQ EVTGQ VELWP VELWP 480 LQAAM FQAAM	QDDLI	360 SAVPK SAVPK SAVPK SAVPK SAVPK SAVPK SAVPK SAVPK SAVPK	THQAL THQAL A30 VYGQF VYHQF SITNI SITNI SLTNI	370 CNTTQ CNTTQ CNTTQ EEKTK ERRAK SQQ ERSLI	WLCLV KTSNG KTSDG 440 YKREP YKREP YKREP	380 SYYLI SYYLI VSLTI VSLTI VSLTI VLQNI VLQNI	Section Section Section Section Section Section RRGLDLL RRGLDLL RRGLDLL RRGLDLL RRGLDLL RRGLDLL Section Section NFTTLIS
SL3-2 MCF-247 SL3-2 MCF-247 SL3-2 MCF-247	(326) (326) (326) (326) (326) (326) (391) (391) (391) (456) (456) (456) (456)	PPPGA PPPGA 326 TYSNE TYSNE CNTGI CSTGI MGGIA MGGIA KEGGI	ASTVP ASTVP ASTVP ASTVP ASTVP ASTPCES ASGVG1	ETAPE ETAPE ANCSVA ANC	PSQQPO PSQQPO A40 ASQHKI ASQHKI ASQHKI AVATQ LVATQ LVATQ	STGDESTGDESTGDESTGDESTGDESTGDESTGDESTGDE	350 EVTGQ EVTGQ VELWP VELWP 480 LQAAM FQAAM	QDDLI	360 SAVPK SAVPK SAVPK SAVPK SAVPK SAVPK SAVPK SAVPK SAVPK	THQAL THQAL A30 VYGQF VYHQF SITNI SITNI SLTNI	370 CNTTQ CNTTQ CNTTQ EEKTK ERRAK SQQ ERSLI	WLCLV KTSNG KTSDG 440 YKREP YKREP YKREP	380 SYYLI SYYLI VSLTI VSLTI VSLTI VLQNI VLQNI	Section APAGTI APTGTT Section CALLEGG CALLEGG RRGLDLL RRGLDLL RRGLDLL Section

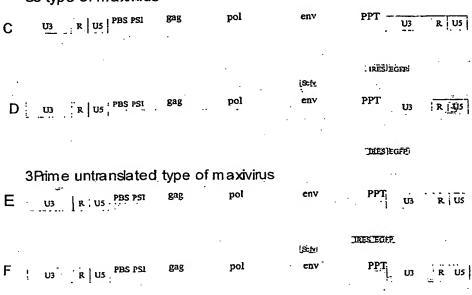
Fig. 2

Replication competent virus

A . U3 · R U5 : PBS PS	n gag	pol	env	PPT U3 R US
			Sch.	
R B B B PS PBS PS	sı gag	pol	env	PPT U3 R US

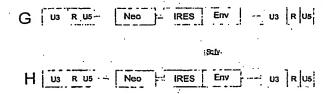
Replication competent vector

U3 type of maxivirus



A retroviral expresion vector containing envelope (Minivirus)

'IRES EGFP



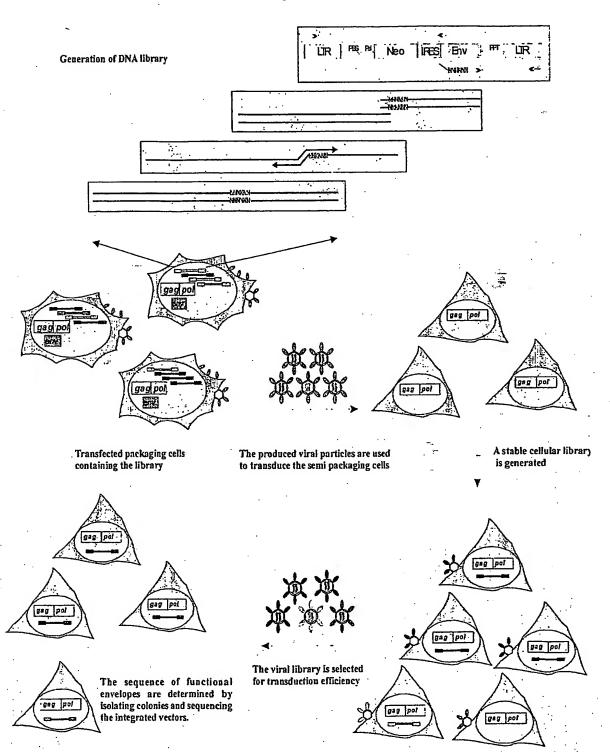
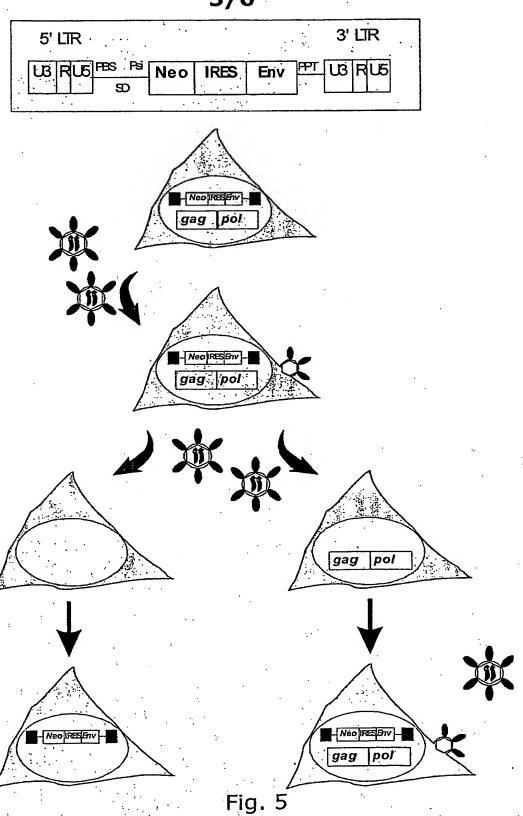


Fig. 3



BEST AVAILABLE COPY

The genomic structure of minivirus

LTR	PBS	Psi [Neo	IRES	Env	PPT	LTR
PBS Prin Psi: Pac	nerbind kaging :	signal	at otranserase II	Env: E	Intemal Ribos Envelope ger Olypurine Tra	ne	ntry Ste

Fia. 6